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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,645	06/07/2001	Mingqiu Sun	884.439US1	9088
21186	7590	08/13/2004	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			TANG, KENNETH	
			ART UNIT	PAPER NUMBER
			2127	

DATE MAILED: 08/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/876,645	<b>Applicant(s)</b> SUN ET AL.	
	<b>Examiner</b> Kenneth Tang	<b>Art Unit</b> 2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-36 are presented for examination.

***Specification***

2. Applicant is required to update the status of all related applications in the introductory paragraph of the specification.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

- a. In claim 1, “providing distributed queuing of workflows” (line 2) is indefinite because it is not made explicitly clear in the claim language who or what performs this.
- b. In claim 1, “assigning the workflow” (line 6) is indefinite because it is not made explicitly clear in the claim language who or what performs this.
- c. Claims 9, 17, 22, 27, and 32 are rejected as being indefinite for the same reasons as stated above in a) and c).
- d. In claim 2, “load manager” (lines 1-2) is indefinite because it is not made explicitly clear whether this is located in the client or outside the client, for example.

Art Unit: 2127

e. Claims 10, 18, 23, 28 and 33 are rejected as being indefinite for the same reasons as stated above in d).

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: “one or more execution-requesting clients” and “plurality of workflow engines”. It is not made explicitly clear in the claim language whether the first client is linked only to the first workflow engine, and the second client linked only to the second workflow engine, and so on. In other words, it is not clear whether or not there is a workflow engine for every client. It is unclear whether or not the first client can communicate with the second workflow engine. It is not clear whether or not there is the same number of workflow engines as clients.

5. Claims 9, 17, 22, 27, and 32 are rejected as being incomplete for omitting essential structural cooperative relationships of elements for the same reasons as stated directly above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campbell et al. (hereinafter Campbell) (US 2001/0024497 A1) in view of Nakamura et al. (hereinafter Nakamura) (US 2001/0027477 A1).**

7. As to claim 1, Campbell teaches a method to be performed by a data processing system comprising:

providing distributed queuing of workflows (workflow manager), whose execution is requested by one or more execution-requesting clients, among a plurality of workflow engines (*page 5, [0084], page 6, [0085]*);

Campbell fails to explicitly teach if a workflow is completed by a first workflow engine for an execution-requesting client, sending an explicit and delayed acknowledgement to the execution-requesting client, else assigning the workflow to a second workflow engine.

However, Nakamura teaches determining whether a first workflow is completed by a first client/terminal, and if not completed, then it notifying so that the second terminal/client can be assigned the workflow (*page 1, [0011]-[0012]*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include if a workflow is completed by a first workflow engine for an execution-requesting client, sending an explicit and delayed acknowledgement to the execution-requesting client, else assigning the workflow to a second workflow engine to the existing system and method of Campbell because it provides a means for controlling flows to a workflow controlling system in which there are workflows among a plurality of participants (*page 1, [0007]*).

Art Unit: 2127

8. As to claim 2, Campbell teaches wherein providing is performed by a load manager (workflow manager) (*page 5, [0084], page 6, [0085]*).

9. As to claim 3, Campbell teaches wherein the load manager comprises a commercially available middleware product (*page 15, [0208]*).

10. As to claim 4, Nakamura teaches wherein the explicit and delayed acknowledgement is performed by a certified messaging capability (*page 1, [0004]*).

11. As to claim 5, Nakamura teaches certified messaging capability and Campbell teaches that all communication types are workflow enabled and pass through the load manager (workflow manager) (*page 5, [0084]*).

12. As to claim 6, Campbell teaches wherein the load manager comprises a commercially available middleware product (*page 15, [0208]*).

13. As to claim 7, Campbell teaches wherein the certified messaging capability is performed by a certified message receiver forming part of the workflow (*page 1, [0004], page 5, [0084]*).

14. As to claim 8, Nakamura teaches the certified messaging capability sending an explicit and delayed acknowledgement to the execution-requesting client if the workflow is completed by the second workflow engine (*page 1, [0011]-[0012]*).

15. As to claim 9, it is rejected for the same reasons as stated in the rejection of claim 1.
16. As to claim 10, it is rejected for the same reasons as stated in the rejection of claim 2.
17. As to claim 11, it is rejected for the same reasons as stated in the rejection of claim 3.
18. As to claim 12, it is rejected for the same reasons as stated in the rejection of claim 4.
19. As to claim 13, it is rejected for the same reasons as stated in the rejection of claim 5.
20. As to claim 14, it is rejected for the same reasons as stated in the rejection of claim 6.
21. As to claim 15, it is rejected for the same reasons as stated in the rejection of claim 7.
22. As to claim 16, it is rejected for the same reasons as stated in the rejection of claim 8.
23. As to claim 17, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Campbell teaches the computer operating in a fault-tolerant manner and requesting a workflow execution on behalf of a client (*page 2, [0043] and [0044], page 4, [0061] and [0063]*).

Art Unit: 2127

24. As to claim 18, it is rejected for the same reasons as stated in the rejection of claim 2.
25. As to claim 19, it is rejected for the same reasons as stated in the rejection of claim 4.
26. As to claim 20, it is rejected for the same reasons as stated in the rejection of claim 7.
27. As to claim 21, it is rejected for the same reasons as stated in the rejection of claim 8.
28. As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 17.
29. As to claim 23, it is rejected for the same reasons as stated in the rejection of claims 1 and 2.
30. As to claim 24, it is rejected for the same reasons as stated in the rejection of claim 4.
31. As to claim 25, it is rejected for the same reasons as stated in the rejection of claim 7.
32. As to claim 26, it is rejected for the same reasons as stated in the rejection of claim 8.
33. As to claim 27, it is rejected for the same reasons as stated in the rejection of claim 17.
34. As to claim 28, it is rejected for the same reasons as stated in the rejection of claim 2.



35. As to claim 29, it is rejected for the same reasons as stated in the rejection of claim 4.
36. As to claim 30, it is rejected for the same reasons as stated in the rejection of claim 7.
37. As to claim 31, it is rejected for the same reasons as stated in the rejection of claim 8.
38. As to claim 32, it is rejected for the same reasons as stated in the rejection of claim 17.
39. As to claim 33, it is rejected for the same reasons as stated in the rejection of claim 23.
40. As to claim 34, it is rejected for the same reasons as stated in the rejection of claim 4.
41. As to claim 35, it is rejected for the same reasons as stated in the rejection of claim 7.
42. As to claim 36, it is rejected for the same reasons as stated in the rejection of claim 8.

***Conclusion***

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


- **US 2002/0065701 A1 (Kim et al.)** teaches a workflow management system involving a workflow database, process engine, and load balancing of a plurality of clients.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt  
8/6/04

  
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